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		СО	KRAEV, et al., "The organization of the Human Gene NCX1 Encoding the Sodium-Calcium Exchanger," Genomics, Vol. 37, 1996, pgs. 105-112					
		CP	Database EMBL 'Online', NICOLL, D.A., "Rattus norvegicus sodium-calcium exchanger form 3 (NXC3) mRNA, complete cds," 09/23/96, Database accession no. U53420, XP002222324					
		ca	NICOLL, et al., "Cloning of a third mammalian Na+-Ca2+ exchanger, NCX3;" J. Biol. Chem., Vol. 271, No. 40, 1996, pgs. 24914-24921	\Box				
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		68-	Database EMBL Offline', LEE et al., "Sequence 41 from patent W 00246415," 69/12/02, Database accession no					
		07 -	Catabase EMBL 'Online', BORTOLUZZI, 8, "Home espices mRMA for codium/calcium exchanger, SCL8A6, elternative splice form 8 (SCL8A8 gene), "06/06/01, Database accession no 1304854, YR002222548.					
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0	7	cv	GABELLINI, et al., "The human SLC8A3 gene and the tissue-specific Na+/Ca2+ exchanger 3 isoforms," Gene, Vol. 298, 09/18/02, pgs. 1-7, XF002ZZ3204					
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[OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS									
	Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²						
P	ESQ ³	AY	Bird et al, 1988, "Single-Chain Antigen-Binding Proteins", Science 242:423-426.	_						
ſ	49 A	ΑZ	Bitter et al, 1987, "Expression and Secretion Vectors for Yeast", Methods in Enzymology 153:516-544.							
١	2000	ВА	Colbere-Garapin et al, 1981, "A New Dominant Hybrid Selective Marker for Higher Eukaryotic Cells", J. Mol. Biol. 150:1-14.	L						
'BA	G	88	Cote et al., 1983, "Generation of human monoclonal antibodies reactive with cellular antigens," Proc. Natl. Acad. Sci. USA 80:2026-2030.	_						
RA	cgs	ВС	Gautier et al, 1987, "α-DNA IV:α-anomeric and β-anomeric tetrathymidylates covalently linked to intercalating oxazolopyridocarbazole. Synthesis, physiochemical properties and poly (rA) binding", Nucleic Acids Research 15(16):6625-6641.	_						
	رھتى	BD	Gordon, 1989, "Transgenic Animals", International Review of Cytology, 115:171-229.	-						
	690	BE	Greenspan et al, 1993, "Idiotypes: structure and immunogenicity", FASEB Journal 7:437-444.	_						
	روي	BF	Gu et al, 1994, "Deletion of a DNA Polymerase β Gene Segment in T Cells Using Cell Type-Specific Gene Targeting", Science 265:103-106.	_						
	دوي	BG	Huse et al, 1989, "Generation of a Large Combinatorial Library of the Immunoglobulin Repertoire in Phage Lambda", Science 246:1275-1281.	_						
	روي	вн	Huston et al, 1988, "Protein engineering of antibody binding sites: Recovery of specific activity in an anti-digoxin single- chain Fv analogue produced in Escherichia coli", Proc. Natl. Acad. Sci. USA 85:5879-5883.							
I	692	BI	Inoue et al, 1987, "Sequence-dependent hydrolysis of RNA using modified oligonucleotide splints and R Nase H", FEBS Letters 215(2):327-330.	-						
	دون	BJ	Inoue et al, 1987, "Synthesis and hybridization studies on two complementary nona(2'-O-methyl)ribonucleotides", Nucleic Acids Research 15(15):6131-6149.							
	دوري	вк	Incuye & Incuye, 1985, "Up-promoter mutations in the Ipp gene of Escherichia coli", Nucleic Acids Research 13(9):3101-3110.	_						
	دوي	BL	Janknecht et al, 1991, "Rapid and efficient purification of native histidine-tagged protein expressed by recombinant vaccinia virus", PNAS 88:8972-8976.							
	450	вм	Kohler & Milstein, 1975, *Continuous cultures of fused cells secreting antibody of predefined specificity*, Nature 256:495-497.	F						
	Cops	BN	Lakso et al, 1992, "Targeted oncogene activation by site-specific recombination in transgenic mice", Proc. Natl. Acad. Sci. USA 89:6232-6236.	-						
	دوي	во	Lavitrano et al, 1989, "Sperm Cells as Vectors for Introducing Foreign DNA into Eggs: Genetic Transformation of Mice", Cell 57;717-723.	F						
ľ	40	ВР	Lo, 1983, "Transformation by lontophoretic Microinjection of DNA: Multiple Integrations without Tandem Insertions", Mol. Cell. Biology 3(10):1803-1814.	-						

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Signature	41-00 ale 50	Considered	10120	<u></u>

Wigler et al, 1977, "Transfer of Purified Herpes Virus Thymidine Kinase Gene to Cultured Mouse Cells", Cell 11:223-232. Wigler et al, 1980, "Transformation of mammalian cells with an amplifiable dominant-acting gene", Proc. Natl. Acad. Sci.

coli", Nature 341:544-548.

USA 77(6):3567-3570.

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